

EXHIBIT JRB-2 (REFERENCED DISCOVERY RESPONSES)

1

VOTE SOLAR

DOCKET NO. 2018-319-E

**Duke Energy Carolinas' Response to
Vote Solar's First Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Related to Hager Testimony
Date of Request: January 14, 2019
Date of Response: January 24, 2019**

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☒ NOT CONFIDENTIAL

The attached response to First Data Request #1-2, was provided to me by the following individual: Kaari K. Beard, Rates & Regulatory Manager, Rate Case Planning & Execution, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

1-2 Please refer to Hager Direct p. 14, lines 16-19.

(a) Does the Company's Minimum System Study consider the distribution assets needed if every customer had "some minimum level of usage" to be composed of: (1) the smallest equipment the Company customarily installs, (2) the smallest equipment present on its system, (3) the smallest size equipment currently available in the market currently, or (4) some other benchmark.

(b) If your response to (a) is "some other benchmark", please explain how the minimum sized equipment is determined in detail.

(c) Please explain in detail the Company's justification for its selection of minimum size system components for use in its Minimum System Study.

(d) Please state whether Witness Hager is aware of any other Duke affiliates that perform Minimum System Studies using a different methodology, and if so, explain why the method Duke Energy Carolinas is employing for the purpose of its cost of service study in this application is more suitable.

Response:

In response to (a), the Company's Minimum System Study is based on the smallest equipment the Company customarily installs.

In response to (b), N/A.

In response to (c), we believe this method is most appropriate because it takes into consideration the Company's actual practices and system and is most consistent with the description of the minimum size method in the NARUC Cost of Service Manual (page 91).

In response to (d), Witness Hager is not aware of any other Duke affiliates that perform Minimum System Studies using a different methodology.

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**Duke Energy Carolinas' Response to
Vote Solar's First Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Related to Pirro Testimony
Date of Request: January 14, 2019
Date of Response: January 24, 2019**

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The attached response to First Data Request #1-7, was provided to me by the following individual: Michael Pirro, Director of Rates and Regulatory Planning, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

1-7 Please refer to Pirro Direct Exhibit No. 3.

(a) For Schedule RS (p. 1), please identify the number of customers that fell within each monthly energy usage band based on average monthly energy use during the test year. For example XXXX customers had average energy use of 0 – 100 kWh per month. In your response, please separately identify the number of customers:

- i. With on-site solar generation
- ii. Without on-site solar generation

(b) For Schedule RE (p. 2) Please identify the number of customers that fell within each monthly energy usage benchmark based on average monthly energy use during the test year. For example XXXX customers had average energy use from 0 – 100 kWh per month.

- i. With on-site solar generation
- ii. Without on-site solar generation

Response:

Please see attached file:

[Vote Solar Data Request No. 1 Item 1-7]

**Duke Energy Carolinas' Response to
Vote Solar's First Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Related to Pirro Testimony
Date of Request: January 14, 2019
Date of Response: January 24, 2019**

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The attached response to First Data Request #1-8, was provided to me by the following individual: Michael Pirro, Director of Rates and Regulatory Planning, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

- 1-8 Please refer to Pirro Direct Exhibit No. 4. Please provide an alternative version of this exhibit depicting the results of the cost of service study using the Basic Customer method rather than the Minimum System method, in which 100% of the costs recorded in FERC Accounts 364 through 368 are classified as demand related.

Response:

Please see the attached file :

[Vote Solar Data Request No.1 1-8]

Recovering fixed costs via a kwh charge has the following detrimental consequences: 1) high usage customers subsidize low usage customers; 2) low use customers do not pay the full cost of the utility plant installed to serve them; and 3) does not provide an accurate price signal regarding the Company's costs upon which customers can make economic decisions to make investments that reduce kWh consumption.

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**Duke Energy Carolinas' Response to
Vote Solar's First Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Related to Rate Design
Date of Request: January 14, 2019
Date of Response: January 24, 2019**

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The attached response to First Data Request #1-12, was provided to me by the following individual: Michael Pirro, Director of Rates and Regulatory Planning, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

- 1-12 Please provide any analysis that the Company has performed for the purpose of evaluating the bill impact of the Company's proposed residential customer charge increases on:
- (a) Low-income customers.
 - (b) Customers in each class with on-site generation participating in the net energy metering schedule.

Response:

The Company's review of rate impacts considers various levels of consumption, but does not separately consider customer attributes such as income level or net metering participation.

Recovering fixed costs via a kwh charge has the following detrimental consequences: 1) high usage customers subsidize low usage customers; 2) low use customers do not pay the full cost of the utility plant installed to serve them; and 3) does not provide an accurate price signal regarding the Company's costs upon which customers can make economic decisions to make investments that reduce kWh consumption.

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**Duke Energy Carolinas' Response to
Vote Solar's First Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Related to Hager Testimony
Date of Request: January 14, 2019
Date of Response: January 24, 2019**

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☒ NOT CONFIDENTIAL

The attached response to First Data Request #1-20, was provided to me by the following individual: Kaari K. Beard, Rates & Regulatory Manager, Rate Case Planning & Execution, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

1-20 On page 15 of Witness Hager's testimony, she testifies that "Witness Pirro relied upon costs allocated as being customer-related in the Cost of Service Study in developing his recommendation regarding the Basic Facilities Charge."

(a) Please provide an electronic spreadsheet version, with all cell formulas and file linkages intact, of the unit cost study relied on by Company witness Michael J. Pirro to develop his recommendation regarding the residential Basic Facilities Charge.

(b) Please provide an electronic spreadsheet version, with all cell formulas and file linkages intact, of the unit cost study associated with a version of the Company's cost of service study which classifies 100% of the costs recorded in FERC Accounts 364 through 368 as demand-related (i.e., relies on the Basic Customer method to classify distribution plant costs.)

Response:

In response to (a), please see attached file 'VS DR 1-20 DEC_Unit Cost Study.xlsm' which shows the unit cost study relied on by Company Witness Michael J. Pirro to develop his recommendation regarding the residential Basic Facilities Charge.

In response to (b), please see attached file 'VS DR 1-20 DEC_Unit Cost Study-no Min Sys.xlsm' which shows the unit cost study associated with a version of the Company's cost of service study which classifies 100% of the costs recorded in FERC Accounts 364 through 368 as demand-related.

[VS DR 1-20 DEC_Unit Cost Study]

[VS DR 1-20 DEC_Unit Cost Study-no Min Sys]

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**Duke Energy Carolinas' Response to
Vote Solar's Second Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Reated to Pirro Testimony
Date of Request: January 16, 2019
Date of Response: January 24, 2019**

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☒ NOT CONFIDENTIAL

The attached response to Second Data Request #2-5, was provided to me by the following individual: Michael Pirro, Director of Rates and Regulatory Planning, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

- 2-5 Please refer to Pirro Direct at p. 20, lines 21-22 describing the derivation of class rates for the Company's proposed EDIT-1 Rider.
- (a) Please justify the use of a fully volumetric rider to refund excess deferred income taxes to customers, including how the proposed design is consistent with cost causation.
 - (b) Please confirm or deny that a portion of the accumulated deferred income taxes (ADIT) that give rise to the need for the EDIT-1 Rider are associated with utility plant investments that would be classified as customer or demand-related. If your response is to deny that this statement is true, please explain in detail.

Response:

- a) As an annual adjustment rider, the use of a volumetric rate was selected for administrative ease in collecting and tracking revenues recovered in the rider. Volumetric energy rates apply to all classes allowing a uniform approach for cost recovery purposes. Energy determinants are also more predictable than demand determinants which can be significantly influenced by unusual weather events.
- b) The revenue requirement sought for recovery in the EDIT rider is primarily associated with tax impacts associated with utility plant-related costs.

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**Duke Energy Carolinas' Response to
Vote Solar's Fourth Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Related to Rate Design
Date of Request: February 6, 2019
Date of Response: February 15, 2019**

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The attached response to Fourth Data Request #4-3, was provided to me by the following individual: Michael J. Pirro, Director, Rates & Regulatory Planning, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

- 4-3 Please refer to your response to VS 1-11. Does the “EPRI Study” referred to in this response address customer preferences for fixed charges?

Response:

Yes.

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**Duke Energy Carolinas' Response to
Vote Solar's Fourth Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Related to Hager Testimony
Date of Request: February 6, 2019
Date of Response: February 15, 2019**

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☒ NOT CONFIDENTIAL

The attached response to Fourth Data Request #4-11, was provided to me by the following individual: Michael J. Pirro, Director, Rates and Regulatory Planning, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

- 4-11 Please refer Hager Direct at p. 9, lines 14-15 stating that the 2017 summer coincident peak demand occurred on August 17 at the hour ending at 3 PM. Please provide:
- (a) The total output from residential net-metered systems for this hour in DEC's South Carolina service territory.
 - (b) The total number of residential net-metered systems that had been granted permission to operate as of this date in DEC's South Carolina service territory.
 - (c) The total rated capacity of residential net-metered systems that had been granted permission to operate as of this date in DEC's South Carolina service territory.
 - (d) The total output from non-residential net-metered systems for this hour in DEC's South Carolina service territory.
 - (e) The total number of non-residential net-metered systems that had been granted permission to operate as of this date in DEC's South Carolina service territory.
 - (f) The total rated capacity of non-residential net-metered systems that had been granted permission to operate as of this date in DEC's South Carolina service territory.

Response:

The responses are provided below. Please note that for parts (b), (c), (e) and (f) the Company is able to provide data only for active customers since data was not available for customers, if any, who had been granted permission but were not yet active.

- (a) The Company cannot provide data for net metered customers for a specific hour since the Company does not currently track total output from residential net-metered customers by the hour.
- (b) The number of ACTIVE DEC SC Residential net-metered systems as of 7/31/18 was 2,740. The Company is unable to provide the number of permits as of this date.
- (c) The total KWDC capacity of ACTIVE DEC SC Residential net-metered systems as of 7/31/18 was 26,346 kW. For the reason provided in (b) the Company is unable to calculate this for all permitted customers.
- (d) The Company is unable to provide hourly data for non-residential net metered customers since the Company does not currently track total output from non-residential net-metered customers by the hour.
- (e) The number of active DEC SC Non-residential net-metered systems as of 7/31/18 was 52.
- (f) The total KWDC capacity of active DEC SC Non-residential net-metered systems as of 7/31/18 was 4,868kW.

**Duke Energy Carolinas' Response to
Vote Solar's Fifth Set of Written Discovery Request
Pursuant to S.C. Code Ann. § 58-4-55
Docket No. 2018-319-E
Related to Basic Facilities Charge
Date of Request: February 11, 2019
Date of Response: February 15, 2019**

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☒ NOT CONFIDENTIAL

The attached response to Fifth Data Request #5-1, was provided to me by the following individual: Leigh A. Puryear, Community Relations Liaison, and was provided to Vote Solar under my supervision.

Heather Shirley Smith
Deputy General Counsel
Duke Energy Carolinas, LLC

DUKE ENERGY CAROLINAS

Request:

5-1 On February 10, 2019, an opinion article was published in the Greenville News by Mr. Kodwo Ghartey-Tagoe on the Company's proposed basic facilities charge increase, available in online form at <https://www.greenvilleonline.com/story/opinion/2019/02/10/opinion-why-duke-seeking-hike-s-c-fixed-basic-facilities-fee/2794505002/>.

(a) Please explain the full basis and understanding, including any supporting data, Mr. Ghartey-Tagoe relied upon in making the following factual assertions:

(1) "[M]ost utilities across South Carolina and the nation have similar charges, and other utilities are moving toward higher customer charges."

(2) "For instance, low-income families and seniors, who can least afford an increase, are not impacted any more than other customers by using less energy."

(3) "Many of our low-income customers actually have relatively high bills, which might correlate with a less energy efficient home."

(b) Is it Mr. Ghartey-Tagoe's contention that all or most solar customers are "low-usage" customers? Please fully explain what average monthly usage level Mr. Ghartey-Tagoe considers to be low-usage and high-usage in the context of this article.

(c) Does Mr. Ghartey-Tagoe acknowledge that currently the only way the Company is allowed to raise the basic facilities charge (or apply any additional recurring fixed fee) for residential solar customers is to raise the basic facilities charge (or apply any additional fee) for all residential customers?

(d) Does Mr. Ghartey-Tagoe acknowledge that the number of DEC's low-usage, low-income residential customers is higher than the number of DEC's low-usage solar customers?

(e) Does Mr. Ghartey-Tagoe acknowledge that the total bill impact of the residential basic facilities charge increase is more severe on low-usage customers than high-usage customers in terms of percentage of bill increase under the Company's proposed residential rates compared to current rates?

(f) Did the Company utilize an outside public relations firm to assist in drafting and placing Mr. Ghartey-Tagoe's article? If so, please identify the firm and

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identify whether the Company's scope of work and engagement with the firm includes ongoing legislative efforts related to advancing the Company's position on residential solar customers and net energy metering

Response:

(a1): Please refer to the two attachments. The first file named "Vote Solar DR 5-1 _ SC Electric Utilities BFC" illustrates the utilities and cooperatives within South Carolina and their associated BFC. The second file named "Vote Solar DR 5-1 _ 50 States of Solar" from North Carolina Clean Energy contains information across the industry related to current and pending BFCs.

[Vote Solar DR 5-1 _ SC Electric Utilities BFC]

[Vote Solar DR 5-1 _ 50 States of Solar]

(a2): A review of residential usage for households with annual household income of \$30,000 or less identified an average monthly usage of 913 kWh which isn't significantly less than an average South Carolina customer using 1,100 kWh per month.

(a3): The average usage of 913 kWh for households with annual household income of \$30,000 or less includes customers above and below the average consumption. The Company isn't certain of the cause of higher usage other than perhaps extreme weather events, inefficient dwellings and renters who have no incentive to utilize EE products.

(b): No, it is not the Company's contention that all solar customers are low-usage. Solar generation does however reduce a customer's consumption. A "low-usage" customer is one using less than the class average consumption of approximately 1,100 kWh that is being subsidized by high-usage customers using greater than the class average usage.

(c): No, the Company could propose new rate schedules specific to residential solar customers.

(d): Yes.

(e): The Company agrees that customers with less than average usage, all other variables being held constant, will experience an increase in their monthly bills if the Company is allowed to increase its Basic Facilities Charge.

(f): No.